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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/602,049	06/23/2000	Michael H L Cheng	380112-141	9505

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EXAMINER

BLAU, STEPHEN LUTHER

ART UNIT

PAPER NUMBER

3711

DATE MAILED: 11/14/2003

19

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/602,049

Applicant(s)

CHENG, MICHAEL H L

Examiner

Stephen L. Blau

Art Unit

3711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-15,17,19-32 and 35-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3,5-15,17,19-32 and 35-37 is/are allowed.
- 6) ☒ Claim(s) 38-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 10
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 38 and 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takezawa in view of Takemura and Honma.

Takezawa discloses a golf club shaft (Col. 1, Lns. 25-31), a plurality of fiber reinforced resin layers, an inner fiberglass prepreg (Fig. 3 (Ref. No. 4A), Fig. 20 (Ref. Nos. 1'), Col. 5, Lns. 52-62, Col. 6, Lns. 24-34) over fiber reinforced resin layers (Fig. 20, Ref. Nos. 101' and 102'), an outer fiberglass prepreg (Fig. 3 (Ref. No. 4B), Fig. 20 (Ref. Nos. 1'), Col. 5, Lns. 52-62, Col. 6, Lns. 24-34), and a plurality of metal fibers (Fig. 3, Ref. No. 6, Col. 6, Lns. 37-42) located between an inner and outer fiberglass prepreg and the only structures between the inner and outer fiberglass prepreg (Fig. 3, Ref. Nos. 4A, 4B, Col. 5, Lns. 52-62, Col. 6, Lns. 25-35, Col. 7, Lns. 28-52).

Takezawa lacks layers defining a tip, a tip section, a main body section, a grip section, a butt, a longitudinal axis, longitudinally extending metal fibers parallel to a longitudinal axis, and the inner and outer fiberglass prepreg being scrim cloth.

Takemura discloses a shaft having layers defining a tip, a tip section, a main body section, a grip section, a butt, and a longitudinal axis (Figs. 2, 5). In view of the patent of Takemura it would have been obvious to include in the shaft of Takezawa layers defining a tip, a tip section, a main body section, a grip section, a butt, and a longitudinal axis in order to have a length to a shaft to increase the velocity of a head at impact. Honma discloses longitudinally extending metal fibers being plus or minus 3 degrees with a longitudinal axis of a shaft (Fig. 5(f)) and metal fibers being located between two sheets with one being a scrim cloth (13) (Col. 3, Lns. 27-68). Takemura discloses an outer layer having longitudinally extending fibers parallel to a longitudinal axis (Fig. 4(c)). In view of the patents Honma and Takemura it would have been obvious to modify the shaft of Takezawa to have longitudinally extending metal fibers parallel to a longitudinal axis in order to reinforce the shaft in a longitudinal direction making it stiffer for a stronger player who swings a shaft fast. In view of the patent of Honma it would have been obvious to modify the shaft of Takesawa to have the inner and outer fiberglass prepreg being scrim cloth in order to utilize a fiberglass prepreg known in the art.

3. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takezawa in view of Takemura and Honma as applied to claims 38 and 40-41 above, and further in view of Noguchi.

Takezawa lacks metal layers being visible through an outer scrim cloth. Noguchi discloses an inner layer being visible through an outer glass cloth (Col. 1, Lns. 25-28).

In view of the patent of Noguchi it would have been obvious to modify the shaft of Takezawa to have metal layers being visible through an outer scrim cloth in order to make a shaft visually pleasing to golfer.

Allowable Subject Matter

4. Claims 1, 3, 5-15, 17, 19-32, and 35-37 are allowed. With respect to claims 1 and 19, none of the prior art discloses or renders as obvious a plurality of resin layers, first and second metal fibers located between two resin layers, a second metal fiber length being greater than a first metal fiber length, and first and second metal fibers located between an inner scrim cloth and an outer scrim cloth in addition to the other elements of structure claimed. With respect to claim 35, none of the prior art discloses or renders as obvious at least one of the plurality of relatively heavy metal fibers, the plurality of relatively stiff metal fibers, and the plurality of relatively resilient metal fibers being located between a different two of the fiber reinforced resin layers than the other in addition to the other elements of structure claimed.

Response to Arguments

5. The argument that it is improper to combine the teachings of Takezawa and Honma since none of the teachings would disclose an outer scrim cloth is disagreed with. Takezawa does disclose glass fiber resin pre-impregnated sheet in place of

carbon fiber resin pre-impregnated sheets surrounding metal fibers (Fig. 3 (Ref. Nos. 4A, 4B), Fig. 20 (Ref. Nos. 1'), Col. 5, Lns. 52-62, Col. 6, Lns. 24-34). Honma discloses suitable type of glass fiber resin pre-impregnated sheet in the form of cloth and resin (scrim cloth) (Col. 3, Lns. 27-68) available in the market place. An artisan would have used a suitable type of glass fiber resin pre-impregnated sheet found in the market place to locate around metal fibers. Using scrim cloth would result in there being an outer scrim cloth. The argument that it is improper to use the reference of Honma since Honma has a metal fiber layer covered by a carbon fiber sheet is disagreed with. Honma was not used to show metal fibers located between inner and outer glass fiber sheets. Honma was used to show that it is known to make fiber glass sheets as scrim cloth when placing near a metal fiber layer.


6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Blau whose telephone number is (703) 308-2712. The examiner is available Monday through Friday from 8 a.m. to 4:30 p.m.. If the examiner is unavailable you can contact his supervisor Greg Vidovich whose telephone number is (703) 308-1513. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0858. (TC 3700 Official Fax 703-872-9306)

Slb/ 8 November 2003


STEPHEN BLAU
PRIMARY EXAMINER